Notice of Allowability	Application No.	Applicant(s)	
	10/783,625	CZAJKOWSKI ET AL.	
	Examiner	Art Unit	
	ERIC C. WAI	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *07/21/2009 and interview 11/05/2009*.

2. ☒ The allowed claim(s) is/are *1-5,7-18, 20-25, 27-30, 32-45, renumbered 1-41*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20091106* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert C. Kowert (Reg No. 39,255) on 11/05/2009.

Please amend the Application as follows:

In the Claims:

1. (Currently amended) A computer-readable storage medium storing program instructions computer-executable to perform operations comprising:

encoding a first association between a single computer resource and one or more resource management policies for the single computer resource;

encoding a second association between the single computer resource and one or more resource management policies for the single computer resource, wherein at least one of the one or more resource management policies associated with the single resource by the second encoding is different from the one or more policies associated with the single resource by the first encoding;

a policy imposing isolate installing in a first resource domain structure a set of one or more policy actions corresponding to the one or more resource management policies associated with the single resource by the first encoding;

binding one or more encapsulated computations that are consumers of the single resource to a single one of the first and second encodings; and

executing the one or more encapsulated computations in accordance with the one or more resource management policies for the single computer resource that are associated with the single computer resource by the single encoding that is bound to the one or more encapsulated computations.

2. (Previously presented) The computer-readable storage medium of claim 1, wherein the encapsulated computations correspond to a collaborative application.

3. (Previously presented) The computer-readable storage medium of claim 1, wherein an encapsulated computation does not share state with other encapsulated computations.

4. (Currently amended) The computer-readable storage medium of claim 1, wherein said encoding the first association includes instantiating [[a]] the first resource

domain structure, wherein the first resource domain structure includes data indicating the single computer resource.

5. (Currently amended) The computer-readable storage medium of claim 4, wherein said encoding further includes indicating [[a]] the set of one or more policy actions for the single resource~~, the set of policy actions corresponding to the one or more resource management policies~~.

6. (Cancelled)

7. (Previously presented) The computer-readable storage medium of claim 5, wherein the first resource domain structure also indicates a set of one or more triggers for the single resource, wherein the one or more triggers correspond to respective actions of the set of policy actions.

8. (Previously presented) The computer-readable storage medium of claim 4, wherein the first resource domain structure also indicates that a reservation on the single resource has been established.

9. (Previously presented) The computer-readable storage medium of claim 4, wherein said binding the one or more encapsulated computations to a single one of the

first and second encodings comprises indicating in a registry each of the encapsulated computations and the single encoding.

10. (Previously presented) The computer-readable storage medium of claim 5, wherein the program instructions are further executable to implement a dispenser retrieving the set of policy actions from the first resource domain structure and executing one or more of the policy actions to handle a resource request for the single resource, wherein the dispenser is an isolate that handles requests for the single resource.

11. (Previously presented) The computer-readable storage medium of claim 1, wherein said binding the one or more encapsulated computations to a single one of the first and second encodings comprises indicating to each of the encapsulated computations the single encoding.

12. (Previously presented) The computer-readable storage medium of claim 1, wherein the single computer resource comprises a physical computer resource or a logical computer resource.

13. (Currently amended) A computer-implemented method, comprising:

encoding a first association between a single computer resource and one or more resource management policies for the single computer resource;

encoding a second association between the single computer resource and one or more resource management policies for the single computer resource, wherein at least one of the one or more resource management policies associated with the single resource by the second encoding is different from the one or more policies associated with the single resource by the first encoding;

binding one or more isolates that are consumers of the single resource to a single one of the first and second encodings, wherein each isolate includes one or more encapsulated computations that do not share state with of other computations; and

executing the one or more isolates in accordance with the one or more resource management policies for the single computer resource that are associated with the single computer resource by the single encoding that is bound to the one or more isolates;

wherein each of the one or more resource management policies associated with the single computer resource by the encoding of the first association is defined by a policy imposing isolate that installs the resource management policy in the encoding of the first association.

14. (Previously presented) The method of claim 13, wherein the encoding of the first association indicates the single computer resource.

15. (Previously presented) The method of claim 14, wherein the encoding of the first association further indicates a set of one or more policy actions corresponding to the one or more resource management policies, wherein execution of the set of policy actions causes a policy decision to be generated for the single computer resource.

16. (Previously presented) The method of claim 14, further comprising a dispenser isolate retrieving the set of policy actions from the encoding of the first association and executing one or more of the policy actions to invoke a policy imposing isolate.

17. (Previously presented) The method of claim 14, wherein the encoding of the first association also indicates availability of the single computer resource.

18. (Previously presented) The method of claim 14, wherein the encoding of the first association also indicates that a reservation on the single computer resource has been established.

19. (Cancelled)

20. (Currently amended) The method of claim [[19]] 1, wherein the bound isolates include the policy imposing isolate.

21. (Previously presented) The method of claim 13, further comprising indicating the encoding of the first association in a registry of resource management policy-computer resource association encodings.

22. (Previously presented) The method of claim 13, further comprising characterizing the single computer resource with generic attributes, and wherein the generic attributes comprise disposable, revocable, reservable, and bounded.

23. (Previously presented) The method of claim 13, wherein the one or more isolates correspond to a collaborative application.

24. (Currently amended) A machine-readable storage medium storing two or more encodings of a data structure, each encoding of data structure comprising:

a first data field configured to store data indicating a same single computer resource;

a second data field configured to store data indicating one or more resource management policies for the single computer resource, wherein data stored in the second data field of one of the two or more encodings indicates at least one resource management policy for the single computer resource that is different from the one or more resource management policies for the single computer resource indicated by the data stored in the second data field of another one of the two or more encodings; [[and]]

a third data field configured to store data indicating availability of the single computer resource; and

a fourth data field configured to store data indicating usage of the single computer resource by a set of one or more encapsulated computations bound to the data structure;

wherein the data stored in the first, second, [[and]] third and fourth data fields of the two or more encodings is accessible by a computer for managing the single computer resource.

25. (Currently amended) The storage medium of claim 24, wherein each encoding of the data structure further comprises a ~~fourth~~ fifth data field configured to store data indicating an identifier to identify an association between the single computer

resource indicated in the first data field and a resource management policy indicated in the second field.

26. (Cancelled)

27. (Previously presented) The storage medium of claim 24, wherein the first data field is further configured to store data indicating attributes of the single computer resource.

28. (Previously presented) The storage medium of claim 27, wherein the attributes of the single computer resource comprise: disposable, revocable, reservable, and bounded.

29. (Previously presented) The storage medium of claim 24, wherein each encoding of the data structure further comprises a fourth data field configured to store data indicating that a reservation of the single computer resource has been established.

30. (Currently amended) A computer-readable storage medium storing program instructions computer-executable to perform operations comprising:

preventing binding of an encapsulated computation that is a consumer of one or more computer resources to two or more resource domain structures that indicate the

same computer resource, wherein each of the resource domain structures represents an association between the computer resource and one or more resource management policies, and wherein at least one of the one or more resource management policies associated with the computer resource by a first one of the resource domain structures is different from the one or more policies associated with the computer resource by a second one of the resource domain structures;

allowing binding of an encapsulated computation that is a consumer of one or more computer resources to two or more resource domain structures that indicate different computer resources; and

executing the bound encapsulated computation in accordance with the one or more resource management policies associated with the computer resource by the resource domain structure bound to the encapsulated computation;

wherein each of the resource domain structures identifies its resource domain and indicates a respective computer resource and one or more associated resource management policies.

31. (Cancelled)

32. (Currently amended) The computer-readable storage medium of claim [[31]] 30, wherein each of the resource domain structures indicates generic attributes of the respective computer resource, wherein the generic attributes comprise one or more of disposable, revocable, reservable, and bounded.

33. (Currently amended) The computer-readable storage medium of claim [[31]] 30, wherein each of the resource domain structures indicates usage of the respective computer resource.

34. (Currently amended) The computer-readable storage medium of claim [[31]] 30, wherein each of the resource domain structures indicates whether a reservation has been established on the respective computer resource.

35. (Currently amended) A computer-readable storage medium comprising program instructions computer-executable to implement:

instantiating two or more instances of a resource domain according to a resource domain class definition, wherein the resource domain class definition provides for associating a single computer resource with one or more resource management policies and for binding one or more isolates to the instance, and wherein each of the two or more resource domain instances associates a same computer resource with a different set of one or more resource management policies for the same computer resource;

binding a set of one or more isolates to one of the two or more resource domain instances, wherein each of the isolates includes a set of one or more encapsulated computations that do not share state with other isolates; and

executing the set of one or more bound isolates in accordance with the one or more resource management policies associated with the same computer resource by the one of the two or more resource domain instances that is bound to the set of one or more isolates;

wherein each of the one or more resource management policies associated with the single computer resource is defined by a policy imposing isolate that installs the resource management policy in one or more of the resource domain instances.

36. (Previously presented) The computer-readable storage medium of claim 35, wherein the resource domain class definition provides a routine for determining current usage corresponding to an instance of the resource domain class.

37. (Previously presented) The computer-readable storage medium of claim 35, wherein the program instructions are further executable to implement one or more routines for unconsuming computer resources.

38. (Previously presented) The computer-readable storage medium of claim 35, wherein the program instructions are further executable to implement one or more routines for attempting to consume a given amount of a computer resource, with the possibility of success or failure.

39. (Previously presented) The computer-readable storage medium of claim 35, wherein the program instructions are further executable to implement one or more routines for indicating computations bound to each of the two or more resource domain class instances.

40. (Previously presented) The computer-readable storage medium of claim 35, wherein the program instructions are further executable to implement regulating association of computations with instances of the resource domain class.

41. (Previously presented) The computer-readable storage medium of claim 35, wherein the program instructions are further executable to implement associating resource domain class instances with dispensers that handle resource requests separately from implementation of the single computer resource indicated in each resource domain class instance.

42. (Currently amended) An apparatus, comprising:

a memory;

means for representing a first association between a single computer resource and one or more resource management policies for the single computer resource;

means for representing a second association between the single computer resource and one or more resource management policies for the single computer resource, wherein at least one of the one or more resource management policies associated with the single computer resource by the second representation is different from the one or more policies associated with the single resource by the first representation;

means for installing in a first resource domain structure one or more policy actions corresponding to the one or more resource management policies associated with the single computer resource by the first representation;

means for binding one or more isolates that are consumers of the single computer resource to a single one of the first and second representations of the association of the single computer resource and the one or more resource management policies, wherein an isolate includes a set of one or more computations that do not share state with other computations; and

means for executing the one or more isolates in accordance with the one or more resource management policies for the single computer resource that are associated with the single computer resource by the single representation that is bound to the one or more isolates.

43. (Currently amended) The apparatus of claim 42, wherein the ~~one or more resource management policies comprise~~ one or more policy actions ~~that~~ provide policy decisions to computer resource requests.

44. (Currently amended) The apparatus of claim 43, wherein the one or more resource management policies ~~further~~ comprise triggers that gate execution of policy actions.

45. (Previously presented) The apparatus of claim 42, further comprising means for indicating usage of the single computer resource.

-- END OF AMENDMENT --

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC C. WAI whose telephone number is (571)270-1012. The examiner can normally be reached on Mon-Fri, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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